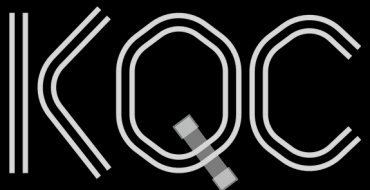







WE BUILD QUANTUM COMPUTERS

Superconducting quantum processor design with [®] **KQCircuits**



github.com/iqm-finland/KQCircuits

 CI **passing**  DOI [10.5281/zenodo.4944796](https://doi.org/10.5281/zenodo.4944796)  License **GPLV3**

Extra material for the school

INSTALLATION INSTRUCTION:

- Install latest klayout (currently 0.29) from [KLayout Layout Viewer And Editor](#) if you use windows. For Mac homebrew [Homebrew — The Missing Package Manager for macOS \(or Linux\)](#) klayout is recommended if you don't have the .dmg installed already. When brew is installed then use this [klayout — Homebrew Formulae](#)
 - Open klayout once and eventually from its Setup set the default behavior to be “Editor” instead of “Viewer”. In editing mode tab
 - Close klayout
 - Have python 3.10/3.11 installed on your pc/mac. Either from python.org or from Anaconda (the second is recommended for Mac users, or brew python alternatively)
 - Create a virtual environment for KQC ([venv — Creation of virtual environments — Python 3.12.2 documentation](#) or Anaconda in the second case)
 - Have an IDE for writing python code installed. Recommended pycharm free, or vscode. Point your IDE to your newly created python environment
 - Install git on your pc/mac [Git - Downloads \(git-scm.com\)](#) . In Mac git can come preinstalled use **git --version** in terminal to check if it exists already (otherwise it could come with Xcode and command line tools)
 - You will find KQC at [GitHub - iqm-finland/KQCircuits: KLayout Python library for integrated quantum circuit design.](#)
 - Go with your terminal into your home folder and do **git clone https://github.com/iqm-finland/KQCircuits.git**
 - A new folder KQCircuits will appear into your home folder
 - With your terminal enter the main KQCircuits folder and do the following steps in developer guide “Developer setup” and “Klayout standalone usage” (found also into the KQC documentation [KQCircuits documentation — KQCircuits documentation \(iqm-finland.github.io\)](#))
 - First terminal command to run into the KQCircuits folder is **python setup_within_klayout.py** (replace with python3 if python command does not exist)
 - Second terminal command to run into the KQCircuits folder is **python -m pip install -e klayout_package/python**
 - If you now open klayout you should see a face based layer system on the right column, some elements/chips libraries in the bottom left corner, and a KQCircuits entry on the top toolbar of KLayout
 - Close klayout
 - Now you can open your python IDE of choice (e.g pycharm/vscode) and checkout the branch for this spring school to start coding!
- NOTE: If you have some troubles, you can also check this past guide instead [GitHub - iqm-finland/KQCircuits-winter-school: KLayout Python library for integrated quantum circuit design.](#) This fork includes exercises for the 2023 iteration of the Winter School for some visual aid, but you should use the winter school KQC of this second guide, but the standard KQCircuits linked in the steps above!